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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/646,512      | 08/23/2003  | James J. deBlanc     | 200206166-1         | 9663             |

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EXAMINER

ULLAH, AKM E

ART UNIT PAPER NUMBER

2874

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/646,512

Applicant(s)

DEBLANC ET AL.

Examiner

Akm Enayet Ullah

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 20-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Detailed Action***

*Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.*

Claims 1-30 are ending in this application.

In response to the office action, dated January 14, 2005 applicant elected Group II, claims 20-30 for the examining purpose. Thus, claims 1-19 withdrawn from examination purpose.

Claims 20-30 are rejected.

**35 USC 103 Rejections**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2874

Claims 20 - 30 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Thackara (USP NO. 6,546,163) **OR** Deacon et al (USP NO. 5,488,681).

Both references disclose an optical cross connect apparatus comprising:

- a first planar layer comprising m optical path (column 2, last paragraph of Thackara et al)

- a second planar layer comprising n optical path (column 2, last paragraph of Thackara et al)

- an optical switch array comprising a plurality of switches wherein the optical switches permit optically any optical path of the first planar layer with any optical path of the second planar layer. For example see (column 2, last paragraph of Thackara et al) and column 80 of Deacon et al.
- Regarding the optical switch array is a liquid crystal optical switch array is known in this art as is mentioned in both references.

Note that the use of first and second layer for this type apparatus is very elementary teachings in this art. For an example, see Fouquet et al (USP NO. 5,699,462)

Both references fail to disclose the selected layer further comprises a channel, wherein the selected optical path is disposed within the channel.

Thackara and Deacon et al references are the evidence that ordinary skill in the art would find a reason, suggestion or motivation to have the selected layer further comprises a channel, wherein the selected optical path is disposed within the channel as claimed in the optical switch array device.

One of ordinary skill in the art would have found it obvious to the selected layer further comprises a channel, wherein the selected optical path is disposed within the channel, since the switch elements are interconnected to each other and to through holes in the upper cladding layer by channels within the core layer for the purpose of filling the trenches within the liquid crystal material. Moreover, this type of switch and the associated cross-connect are suitable for routing and attenuating signals carried by single mode optical fibers over wavelength ranges of interest to the telecommunications industry. For details, as for example see columns 9-11 and 15-16 of Thackara et al.

#### **Citation Of Relevant Prior Art**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. O'Rourke et al and Fouquet et al are also cited to show a typical optical switch array using liquid crystal respectively.


**Applicant's arguments with respect to claims 20-30 have been considered but are moot in view of the new ground(s) of rejection.**

### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akm Enayet Ullah whose telephone number is 571-272-2361. The examiner can normally be reached on Mon.- Wednesday 5:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7721 for regular communications and 703-308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
Akm Enayet Ullah  
Primary Examiner  
Art Unit 2874

AUllah  
May 03, 2006